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PATENTS

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicant:** Wangqi HOU, et al.

**Group Art Unit:** 3672

**Serial No:** 09/595,996

**Docket:** PER0025 (14285)

**Filed:** June 16, 2000

**Dated:** April 26, 2001

**For: SURFACTANT BLENDS FOR  
AQUEOUS SOLUTIONS USEFUL FOR  
IMPROVING OIL RECOVERY**

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MAY 03 2001

Assistant Commissioner for Patents  
United States Patent and Trademark Office  
Washington, D.C. 20231

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**INFORMATION DISCLOSURE STATEMENT**

Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, it is requested that the following references, which are also listed on the attached Form PTO-1449, be made of record in the above-identified case.

1. A Low-Tension Waterflooding Process, W.R. Foster, Journal of Petroleum Technology, Vol. 25, pages 205-210, (February 1973);
2. U.S. Patent No. 3,811,504, issued to Flournoy, et al., dated May 21, 1974;

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**CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner of Patents

Michene Mustata

3. U.S. Patent No. 3,811,507, issued to Flournoy, et al., dated May 21, 1974;
4. U.S. Patent No. 3,506,071, issued to Stanley C. Jones, et al., dated April 14, 1970;
5. U.S. Patent No. 3,637,017, issued to Gale, et al., dated January 25, 1972;
6. U.S. Patent No. 3,811,505, issued to Flournoy, et al., dated May 21, 1974;
7. U.S. Patent No. 3,939,911, issued to Maddox, Jr., et al., dated February 24, 1976;
8. U.S. Patent No. 3,954,627, issued to Dreher, et al., dated May 4, 1976;
9. U.S. Patent No. 3,997,451, issued to Plummer, et al., dated December 14, 1976;
10. U.S. Patent No. 4,042,030, issued to Savins, et al., dated August 16, 1977;
11. U.S. Patent No. 4,110,229, issued to Carlin, et al., dated August 29, 1978;
12. U.S. Patent No. 4,110,232, issued to Schwab, et al., dated August 29, 1978;
13. U.S. Patent No. 4,124,073, issued to Wier, dated November 7, 1978;
14. U.S. Patent No. 4,125,158, issued to Waite, et al., dated November 14, 1978;
15. U.S. Patent No. 4,138,345, issued to Williams, dated February 6, 1979;
16. U.S. Patent No. 4,177,207, issued to Nussbaum, et al., dated December 4, 1979;
17. U.S. Patent No. 4,193,452, issued to Wilson, et al., dated March 18, 1980;
18. U.S. Patent No. 4,194,565, issued to Kalfoglou, dated March 25, 1980;
19. U.S. Patent No. 4,214,999, issued to Carlin, et al., dated July 29, 1980;
20. U.S. Patent No. 4,222,727, issued to Carlin, et al., dated January 20, 1981;

U.S. Patent No. 4,222,727, issued to Carlin, et al., dated January 20, 1981.

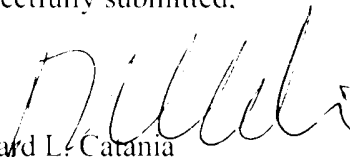
22. U.S. Patent No. 4,252,192, issued to Nussbaum, et al., dated February 24, 1981;
23. U.S. Patent No. 4,265,308, issued to Hedges, et al., dated May 5, 1981;
24. U.S. Patent No. 4,288,334, issued to McCoy, et al., dated September 8, 1981;
25. U.S. Patent No. 4,293,428, issued to Gale, et al., dated October 6, 1981;
26. U.S. Patent No. 4,371,444, issued to McCoy, et al., dated February 1, 1983;
27. U.S. Patent No. 4,393,937, issued to Dilgren, et al., dated July 19, 1983;
28. U.S. Patent No. 4,425,455, issued to Turner, et al., dated January 10, 1984;
29. U.S. Patent No. 4,425,461, issued to Turner, et al., dated January 10, 1984;
30. U.S. Patent No. 4,448,697, issued to McCoy, et al., dated May 15, 1984;
31. U.S. Patent No. 4,458,048, issued to Schmitt, dated July 3, 1984;
32. U.S. Patent No. 4,458,052, issued to Schmitt, dated July 3, 1984;
33. U.S. Patent No. 4,488,976, issued to Dilgren, et al., dated December 18, 1984;
34. U.S. Patent No. 4,525,522, issued to Turner, et al., dated June 25, 1985;
35. U.S. Patent No. 4,529,522, issued to Schmitt, dated July 16, 1985;
36. U.S. Patent No. 4,562,727, issued to Dilgren, et al., dated January 7, 1986;
37. U.S. Patent No. 4,579,669, issued to Walker, et al., dated April 1, 1986;
38. U.S. Patent No. 4,579,671, issued to Lundberg, et al., dated April 1, 1986;
39. U.S. Patent No. 4,615,393, issued to Sedillo, et al., dated October 7, 1986;

41. U.S. Patent No. 5,360,787, issued to Bloys, et al., dated November 1, 1994;
42. U.S. Patent No. 5,911,276, issued to Kieke, dated June 15, 1999;
43. Kirk-Othmer Encyclopedia of Chemical Technology, Vol. 18, 4<sup>th</sup> Ed., pages 404-433, 1996;
44. Enhanced Oil Recovery Using Lignosulphonate/Petroleum Sulphonate Mixtures, C. Chiwetelu, et al., Institution of Chemical Engineers, Vol. 60, 1982;
45. Enhanced Oil Recovery by Displacement with Saline Solutions, Gulf Publishing Company, Book Division, pages 34-53 (1980);
46. Aqueous Surfactant Systems for Oil Recovery, Journal of Petroleum Technology, February, 1973;
47. The Low-Tension Polymer Flood Approach to Cost-Effective Chemical EOR, SPE, DOE, 20220;
48. Surfactant-Enhanced Alkaline Flooding at Intermediate pH, Department of Chemical Engineering, Illinois Institute of Technology, Chicago, IL, 60616, No. 280, Vol. 87;
49. PCT International Application No. WO/99/36376, issued to Berger, et al., dated July 22, 1999; and
50. European Patent Specification No. 0 259 111 B1, issued to Lundberg, et al., dated October 7, 1991;

Applicants are submitting copies of the above-cited references.

Inasmuch as this Information Disclosure Statement is being submitted in accordance with the schedule set out in 37 C.F.R. § 1.97(b), no statement or fee is required.

Respectfully submitted,



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**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.  
**PER0025 (14285)**

In Re Application Of: **Wangqi HOU, et al.**

Serial No.  
**09/595,996**

Filing Date  
**June 16, 2000**

Examiner  
**Unassigned**

Group Art Unit  
**3672**

Title: **SURFACTANT BLENDS FOR AQUEOUS SOLUTIONS USEFUL FOR IMPROVING OIL RECOVERY**

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Washington, D.C. 20231**

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**37 CFR 1.97(b)**

**TO 3600 MAIL ROOM**

1. ☒ The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application; within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; or before the mailing date of a first Office Action on the merits, whichever event occurs last.

**37 CFR 1.97(c)**

2. ☐ The Information Disclosure Statement submitted herewith is being filed after three months of the filing of a national application, or the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; or after the mailing date of a first Office Action on the merits, whichever occurred last but before the mailing date of either:

1. a Final Action under 37 CFR 1.113, or
2. a Notice of Allowance under 37 CFR 1.311,

whichever occurs first.

Also submitted herewith is:

- ☐ a certification as specified in 37 CFR 1.97(e);

**OR**

- ☐ the fee set forth in 37 CFR 1.17(p) for submission of an Information Disclosure Statement under 37 CFR 1.97(c).

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT  
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.  
(PER0025) 4285

In Re Application Of: Wangqi HOU, et al.

APR 30 2001

Serial No.

Filing Date

Examiner

Group Art Unit

25,996

June 16, 2000

Unassigned

3672

Title: SURFACTANT BLENDS FOR AQUEOUS SOLUTIONS USEFUL FOR IMPROVING OIL RECOVERY

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Payment of Fee

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

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- ☐ A check in the amount of \_\_\_\_\_ is attached.
- ☒ The Assistant Commissioner is hereby authorized to charge and credit Deposit Account No. 19-1013/SSMP as described below. A duplicate copy of this sheet is enclosed.
- ☐ Charge the amount of \_\_\_\_\_
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Michelle Mustafa

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Signature

Dated: April 26, 2001

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